## PREVENTING DKA

# UNDERSTANDING DIABETIC KETOACIDOSIS (DKA)

If the body makes too many ketones it causes diabetic ketoacidosis, or DKA.

DKA is a medical emergency! It means you need treatment by your diabetes team or an emergency department doctor.

Common DKA symptoms are:

- Headache
- Nausea
- Extreme thirst
- Extreme peeing
- Vomiting
- Stomach pain

- Fast, shallow breathing
- Drowsiness
- Lack of coordination
- Having trouble thinking
- Coma

Headache and nausea are the most common symptoms. Coma is rare.

#### WHAT ARE KETONES?

Ketones come from the breakdown of fat in the body. Anyone who goes on a diet makes ketones. People on a diet want to make ketones. This is because it means that they are losing weight.

But the body has a very fine balance between breaking down a little fat and breaking down too much fat. Insulin keeps this balance in check.

If you do not have enough insulin in your body you start to break down too many fat cells too fast. This means that your body is making too many ketones. Ketones are acid. They make it hard for your body to work in a normal way.

#### Can testing for ketones help?

Yes. To prevent diabetic ketoacidosis (DKA) an important step is to check for ketones. You should always have ketone test strips at home or with you when you travel.

You can test yourself for ketones. Testing helps because it lets you know if DKA is happening.



Testing for ketones helps because it lets you know if DKA is happening.



#### TESTING FOR KETONES

#### When should I test for ketones?

Test for ketones if you have any of the symptoms above and your blood sugar level is high. Sometimes there may be ketones even if your sugar level is not high. So, you may want to test if you feel sick, too.

#### How do I test for ketones?

You can test for ketones with urine (pee) or blood test strips. Ask your diabetes team which is best for you. Most people use urine testing for ketones.

Checking for urine ketones is easy and cheap. You can buy urine ketone strips at the pharmacy. You do not need a prescription.



1. You will need some of your urine in a cup.



2. Dip the end of the ketone strip into your urine.



3. Read the results based on the instructions on the ketone strip bottle.



Ketones will most often be "trace", "small", "medium" or "large". Different test strips have different scales.



### What should I do if the ketones test shows I have more than "trace"?

If your ketones are more than "trace" you should let your diabetes team know so you can get help.

If you are vomiting and are not able to keep down fluids, you should go to an emergency room (ER) for treatment right away.

In most cases, if you can drink fluids your doctor will be able to have you take insulin, fluids and maybe sugar. Your doctor will be able to help you correct the situation at home. But, it is important that you speak with someone from your diabetes team to figure out what is best for you to do. Most clinics have a doctor on call after the clinic has closed, so you can call anytime. When in doubt go to the ER.

In most cases, you will feel much better quickly once you have gotten some fluids and insulin in your body. Also, there is often a cause for why DKA happened in the first place, such as being sick. That other cause should be treated as well.







I had DKA. Could I have prevented it?

#### HOW CAN I PREVENT DKA?

There are almost always warning signs for DKA. You can almost always prevent DKA if you pay attention and act when you have warning signs.

You can almost always prevent DKA when you:

- Check your blood sugar 4 to 6 times each day.
- Check your blood sugar more often when you are sick.
- Recognize and respond to high sugar levels and other warning signs in the right way.

#### Recognize the main warning signs and symptoms of DKA:

- High blood sugar levels (higher than normal for you)
- Nausea or vomiting
- Headache

#### **Respond:**

- Test for ketones as this will tell you if DKA may be happening.
- Call your doctor's office if you have ketones that are more than trace.
- Go to the ER if you are vomiting and are not able to keep down fluids.

